

Promoting Our Wisconsin Energy Resources



POWER eBIO Newsletter September 2008 Issue No. 23

Your monthly source for news on the growing bio economy

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[Harvesting Wind](#)

We Energies of Milwaukee wants to build a wind farm with 90 turbines and a capacity of up to 234 megawatts in Columbia County near Randolph, according to an application filed with the Wisconsin Public Service Commission. Each turbine planned for the towns of Randolph and Scott would be mounted on a steel tower 262.5 feet above the ground. Blade lengths would be 126 to 152 feet. The Randolph Wind Project is one of more than a half-dozen wind farms under development in WI.

[Don't Pass on Gas](#)

Brown County is working on a plan to convert that once-wasted gas into energy. The Ledgeview Town Board will be reviewing a proposal for a \$4 million project that could generate as much as \$7 million in revenue, and the \$3 million profits. The facility at the former east county landfill is expected to convert as much as 98 percent of the landfill gas into usable energy over about 11 years.

[The Sunny Side of Milwaukee](#)

The Milwaukee School of Engineering and Milwaukee Area Technical College are using emerging energy technologies as teaching tools. Touted as the largest solar project in Milwaukee, the 144 solar panels sit on the roof of the school's student union building and are visible to office workers in nearby downtown buildings. The downtown Milwaukee project, with a price tag of \$235,000, was paid for through a combination of internal funding, a grant from We Energies and a grant Focus on Energy.

[A Resolve to Idle Less](#)

Dane County Supervisor Brett Hulsey and others introduced a resolution to ban unnecessary idling of diesel vehicles that creates pollution that causes heart and asthma attacks, wastes fuel, and increases our reliance on foreign oil. The U.S. Environmental Protection Agency (EPA) recently said that local air quality monitors show that Dane County is above safe levels for fine particle pollution or soot and diesel engines are a large source of that pollution.

[Ladysmith's First](#)

Indeck Energy Services and Midwest Forest Products of Hayward Wisconsin say they are going to build the Indeck Ladysmith Biofuel Center. It will use leftover and excess wood to create wood pellets to burn for energy. The biofuel center will add about 20 jobs to the community, as well as jobs for loggers to collect and deliver the wood.

[Renewable Networks](#)

Wisconsin renewable energy leaders are helping to organize the 3rd Annual Midwest Ag Energy Summit in suburban Chicago. Energy security, the impact of \$150-per-barrel oil on our economy, climate change and its impact on agriculture and future generations are among the most dominant issues of our times. The Summit will bring together over 200 Midwestern ag leaders to network, collaborate and learn how regional networks are shaping and will continue to shape agriculture and energy policies that impact the development of the carbon economy and our energy future.



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Our Nation's Capitol

[Extra Credit](#)

A compromise bill pushed by Sens. Max Baucus (D-Mont.) and Chuck Grassley (R-Iowa) would extend for three years (through December 31, 2011) the \$1.00 per gallon production tax credits for biodiesel and the small biodiesel producer credit of 10 cents per gallon. The bill would also extend for three years (through December 31, 2011) the \$1.00 per gallon production tax credit for diesel fuel created from biomass. The bill eliminates the current-law disparity in credit for biodiesel and agri-biodiesel and eliminates the requirement that renewable diesel fuel must be produced using a thermal depolymerization process. As a result, the credit would be available for any diesel fuel created from biomass without regard to the process used so long as the fuel is usable as home heating oil, as a fuel in vehicles, or as aviation jet fuel. The bill caps the \$1 per gallon production credit for renewable diesel for facilities that co-process with petroleum to the first 60 million gallons per facility. Biodiesel that is imported and sold for export would not be eligible for the credit effective May 15, 2008. The estimated cost of this proposal is \$2.256 billion over ten years.

[More Green for Greener Energy](#)

USDA Secretary Schafer announced another round of awards for USDA Rural Development's Section 9006 Renewable Energy and Energy Efficiency Improvements Program, another \$35 million. Award recipients will use \$27.5 million in grants and \$7.4 million in guaranteed loans to invest in projects that reduce energy consumption or utilize a wide range of new technologies, including biomass, geothermal, hydrogen, solar and wind energy.

[Win-Win-Win](#)

Expanded production of renewable biofuels promises newfound riches to farmers and improved national security, Secretary Schafer recently said at the Dakotafest farm show in Mitchell, S.D. He said raising the country's biofuels mandate would displace 1 billion barrels of foreign oil that wouldn't have to be imported. "If we could do that, we could double the farm income in this country," Schafer said. Congress may also consider legislation covering the use of forest residue from places such as the Black Hills National Forest for cellulosic ethanol production.

Feedstock Watch:

Feedstocks for biofuels, bioproducts & biopower production:

Pennycress	Sweet Potato	Algae
Cattails	Corn Stover	Miscanthus
Agave	Citrus Pulp	Sake
Distillery Waste	DDGs	Pongamia
Horse Waste	Jatropha	Barley

Around the Nation

[U.S. Has Capacity for Ethanol](#)

U.S. capacity to make ethanol has risen about 57 percent since last August to nearly 10.7 billion gallons per year as producers expect government mandates and strong oil prices to open new markets for the alternative motor fuel. At least five new distilleries have opened since August.

[Speaking of Algae...](#)

A North Carolina developer plans to launch a \$236 million biofuel complex in southeastern Arkansas that would use algae as one of its raw materials. Two biodiesel plants, each capable of producing 10 million gallons of fuel annually, will utilize algae grown in former catfish ponds, other oil-bearing plants and animal fats. A third facility will produce 110 million gallons of ethanol annually from cellulosic biomass and dedicated energy crops such as switchgrass, crop residue and logging slash.

[Cellulosic Ethanol Born in 2008?](#)

POET, the world's largest ethanol production company, just announced that construction will be completed on its \$4 million pilot-scale cellulosic ethanol production facility by the end of 2008. When the facility is complete, POET will be able to produce 11% more ethanol from a bushel of corn, 27% more from an acre of corn, all while reducing fossil fuel consumption and water use. The facility called Project LIBERTY, is a 50 million gallon per year grain-to-ethanol plant in Emmetsburg, Iowa, that has been transformed into an integrated corn-to-ethanol and cellulose-to-ethanol biorefinery, and is jointly funded by POET and the U.S. Department of Energy. Once complete, the facility will produce 125 million gallons per year of ethanol, of which 25 million gallons will come from corn fiber and corn cobs.



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Around the World continued...

Refrigerator Art

Energy Star has launched "Recycle My Old Fridge Campaign, that encourages people to recycle" their old refrigerators and freezers and, if necessary, replace them with new Energy Star-qualified models. That old fridge that's keeping the beverages cool in your basement could be costing you well over \$100 per year to operate, as could the relatively newer fridge sitting in your kitchen. Recycling unnecessary fridges and upgrading other fridges to the latest Energy Star models could dramatically cut your electricity bill. If all the pre-1993 refrigerators in the United States were replaced with Energy Star-rated models, the electricity saved would be enough to power more than 8.1 million homes.

Google Geothermal

Google.org, the philanthropic arm of the search engine company, announced last week that it is investing \$10.25 million in Enhanced Geothermal Systems (EGS) technology. EGS employs rock fracturing technologies in high-temperature geological formations deep underground, and it can be used to either create a geothermal reservoir of hot water or steam where none existed before or to extend and enhance an existing geothermal reservoir.

Af-FORD-ing Small Cars, Gaining Fuel Economy

Ford Motor Company is following through on its plans to produce more small cars with a \$75 million investment in the body shop of its Michigan Truck Plant. Starting in November, the company will begin disassembling the tooling and equipment for the Ford Expedition and the Lincoln Navigator. Producing more compact and subcompact cars will yield significant gains in fuel economy for Ford, but of course those gains will be gradual and incremental.

Check out the Office of Energy Independence on the Web

<http://power.wisconsin.gov>

Up-to-date information on:

- Funding Opportunities
- Events
- Biofuels
- Bioproducts
- And, more!

The Ethanol Revolution

Ethanol and its producers, including farmers, stand on the very edge of the energy revolution. The Omaha meeting of the American Coalition for Ethanol demonstrated the great strides are being made in increased corn yields, ethanol byproducts, cellulosic ethanol production, pipeline transportation and ethanol blends. Also, in 2007, ethanol prevented more than 1 million tons of greenhouse gases from entering the environment. Ethanol by itself isn't the solution to the nation's fuel needs. But it can be, and already is in some instances, a major part of the answer.

Around the World

Sino-Sorghum Pact

USDA and China signed an agreement at the International Conference on Sorghum for Biofuel in Houston to collaborate on biofuels research. The agreement reached establishes the intent for the US and China to cooperate on processes and infrastructure for converting sweet sorghum and other feedstocks to ethanol. The effort is to involve some of the world's top scientists as well as universities and businesses in both China and the US as they specifically work on sweet sorghum conversion to ethanol and the use of cellulosic sorghum for ethanol.

China's Fiji Fuel Four

Four Chinese experts in ethanol production will be in Fiji this month to carry out studies on the requirements of setting up a plant and identify potential factory sites. The experts from the Guangxi State Farm will visit Fiji from September 17 to as long as it will take to complete the study. A tentative itinerary of the delegation's mission include visits to Fiji's four sugar mills, seeing possible cassava farm lands, identifying existing kinds of cassava crop and checking out possible lands for factory sites

Green Kiwi Crude

A New Zealand company working on technology to convert wild algae in Blenheim's sewerage ponds into fuel has produced its first samples of green crude oil at a commercially competitive price. Aquaflow Bionomic Corporation is refining the processes it has developed to create a next-generation fuel it calls "green crude". Green crude is basically a manufactured form of crude oil. In contrast to earlier generations of biodiesel, additional food crops or agricultural land are not needed and the end product is not just a fuel but can be used in products in the same way as crude oil can,

Around the World continued...

[Don't Be Modest](#)

European legislators have dramatically pared back ambitious targets for using crop-based biofuels, in favor of more modest goals. The fledgling industry promptly fired back with a campaign warning that alternatives might be no cleaner. European Union governments pledged last year to increase the use of biofuels in transport to 10 percent by 2020, from a negligible amount currently, amid optimism that energy derived from crops would provide a low-carbon way to power vehicles. The European Parliament's influential Industry Committee endorsed the general 10 percent target but added a number of modifications meant to move away from traditional biofuels made from grains or other crops toward other, renewable energy sources.

[Como Se Dice, Biofuels?](#)

Mexico plans to step up its planting of biofuel crops and wants the state energy monopoly Pemex to adapt its distribution network to include alternative fuels. President Felipe Calderon said his government would invest 875 million pesos (\$83 million) to plant 100,000 hectares of land with vegetable oil-producing plants that can be converted to fuel. Calderon wants Pemex to change its gasoline and oil distribution model to incorporate national consumption of biodiesel and ethanol, in order to increase the production of biofuels in Mexico. "We want to generate renewable energy, biodiesel and ethanol, without affecting the production of food in Mexico," Calderon said. In 2007, tens of thousands of Mexican citizens marched in a protest against a 400% increase in the price of tortillas, which many blamed on the use of corn to make biofuels.

Upcoming Events

Engineering for Synthesis of Higher-chain Alcohols as Biofuels - 9/29/2008

RE-fest - Austin, MN - 9/30/2008

Advanced Biofuels Workshop - Minneapolis, MN - 9/28/2008—9/30/2008

Agricultural & Forestry Recommendations for the Governor's Global Warming Task Force - Webinar - 10/1/2008

National AFV Odyssey Day - Milwaukee, WI - 10/2/2008

Sustainable Energy for Green Communities - Webinar - 10/2/2008

Solar Domestic Hot Water Systems - LaCrosse, WI - 10/3/2008

National AFV Odyssey Day - Madison, WI - 10/3/2008

Wisconsin Solar Tour - Various Locations in WI - 10/3/2008—10/4/2008

BioCycle Conference - Madison, WI - 10/6/2008—10/8/2008

Cellulosic Ethanol & Biofuels - Chicago, IL - 10/9/2008—10/10/2008

Costs and Benefits of an Expanding Biofuels Industry - Madison, WI - 10/13/2008

Energy Utility Basics - Madison, WI - 10/13/2008—10/17/2008

Nutrient Innovation and Technology Tour - Wisconsin - 10/14/2008—10/17/2008

Biodiesel-like Fuels Produced by Biotechnology - Madison, WI - 10/20/2008

Plant Cell Wall Synthesis & Biofuels - Madison, WI - 10/27/2008

Bioplastic & Composites: Wisconsin's Bioproduct's Future - 10/27/2008

Mechanical System Design for Green Buildings - Madison, WI - 10/28/2008—10/30/2008

Commissioning Process for Quality Constructed Projects - WI - 10/27/2008—10/31/2008
